The Environmental Assessment for Decommissioning the Reactor Facility

NASA Glenn
Plum Brook Station

This is one in a series of fact sheets prepared by NASA Glenn Research Center (NASA) to provide the public wit information about decommissioning the closed Reactor Facility at Plum Brook Station. This fact sheet describe NASA's Environmental Assessment of the proposed decommissioning process in accordance with the Nationa Environmental Policy Act.

From 1962 to 1973, NASA operated a 60 megawatt nuclear reactor and a 100 kilowat mock-up reactor at Plum Brook Station under an operating license granted by th Nuclear Regulatory Commission (NRC) to study the effects of radiation on materials use in space flight.

Decommissioning the Reactor Facility

After 11 years of operating the Reactor Facility under rigorous safety precautions an continuous monitoring, NASA properly shut down the Reactor Facility in 1973, remove the fuel, and made the facility inoperable. Since then, NASA has provide comprehensive maintenance and strict oversight of the Reactor Facility under the term of the "Possess But Do Not Operate" license from the NRC. In 1998, NASA applied fo renewal of its "Possess But Do Not Operate" license. Instead, the NRC asked NASA t complete decommissioning of the Reactor Facility in order to terminate its license.

NASA's Preferred Decommissioning Alternative

- Removing contaminated equipment components, and systems
- Removing contaminated debris and soil
- Decontaminating buildings and structures
- Demolishing structures to an elevation of 3 feet belowgrade
- Backfilling belowgrade portions of the buildings with clean fill.

NASA agreed with the NRC that decommissioning the Reactor Facilit makes sense. In 1998, NASA completed an evaluation of severa decommissioning alternatives. From that analysis, NASA proposed t decontaminate and decommission the Plum Brook Reactor Facility fo unrestricted use. NASA submitted a comprehensive Decommissionin Plan to the NRC in December, 1999.

NRC's review of the Plan is expected to take up to a year. NAS anticipates decommissioning to begin in late 2001 and be completed i 2007. While the NRC reviews the Decommissioning Plan, NASA i preparing an Environmental Assessment to evaluate the impacts on th environment of the proposed action in accordance with the Nationa Environmental Policy Act (NEPA).

The National Environmental Policy Act (NEPA)

The NEPA process requires that a review of environmental impacts be done in the earl stages of planning a major federal action with the potential to significantly affect th quality of the human environment. Because decommissioning is considered a majo federal action, NASA is performing a NEPA review to evaluate the environmental impact of the proposed action. In a separate evaluation, the NRC completed a NEPA revie which was performed independently of NASA's Environmental Assessment, because th NRC is the federal agency that is responsible for terminating the Reactor Facility's license

NEPA Requires Federal Agencies to:

- Consider the environmental impacts of major federal projects or decisions which include
  - spending federal money (NASA is responsible for decommissioning the Reactor Facility and funding it)
  - issuing permits (NRC is terminating a license)
  - taking actions that affect federal land
- Share information about environmental impacts with decisionmakers, public officials and citizens before decisions are made and actions are taken.
- Identify and assess reasonable alternatives that are technically and economically feasible, and can be accomplished in the necessary timeframe. The No Action alternative is also considered.
- Integrate and coordinate with any other planning and environmental reviews taking place.

NASA's Environmental Assessment Will Consider:

Air quality & meteorology

Water resources

Waste generation, treatment, transportation, & disposal

Geology, soils, & topography

Noise, sonic boom, & vibration

Toxic substances & hazardous materials

Biological resources & ecology

Radioactive materials & non-ionizing radiation

Endangered & threatened species

Historical, cultural, & archeological resources

Wetlands, floodplains, & prime or unique farmland

Land use

Socioeconomic factors (if related to impacts to natural or physical factors)

Infrastructure

Accidents involving hazardous, toxic, or radioactive materials

Environmental justice

Pollution prevention

Public health & safety

Stratospheric ozone depletion & global climate change

What will the Environmental Assessment Include?

When evaluating decommissioning alternatives in 1998, NASA considere environmental impacts associated with each alternative. The Environmental Assessmer of NASA's proposed action will use the information from that analysis and consider othe potential impacts to the environment. (See full list on left) NASA expects th Environmental Assessment to be completed by the end of September, 2000.

If NASA's Environmental Assessment finds potentially significant impacts, then a Notice of Intent (NOI) will be posted in the Federal Register stating that significant impacts are expected and NASA must prepare an Environmental Impact Statement (EIS). If, as expected, no potentially significant impacts are found, a Finding of No Significant Impact (FONSI) will be prepared stating reasons why decommissioning will not have a significant effect on the human environment and, therefore, why an EIS will not be prepared.

The NRC completed its Environmental Assessment and has determined that an Environmental Impact Statement is not required. The NRC's Environmental Assessment, which is independent of NASA's Environmental Assessment, can be reviewed in the March 28, 2000 Federal Register.

Public Participation

NASA values public participation in all stages of the decommissioning process includin preparing the Environmental Assessment. NASA regularly shares information on th Reactor Facility decommissioning process with its fifteen-member Community Wor Group. When the draft Environmental Assessment is completed, the document will b published in the Federal Register and a 30-day public review and comment period w be provided. As it does with all documents on the decommissioning process, NASA w place the draft Environmental Assessment in the Community Information Bank a Firelands College and other publicly accessible places. Following public review, th Environmental Assessment will be finalized and either a Finding of No Significant Impac (FONSI) or Notice of Intent (NOI) will be published in the Federal Register.

Prepare draft EA ► **Public availability in Federal Register** ► **30 day public review** ► **Finalize EA**

NASA continues to be responsible for compliance with applicable regulations such a NEPA throughout the duration of the decommissioning process. Conducting a Environmental Assessment is one of the many steps NASA is taking to ensure the safe an thorough decommissioning of the Reactor Facility.

For more information contact
Sally V. Harrington 216-433-2037

NASA Glenn Research Center
Community and Media Relations Office